

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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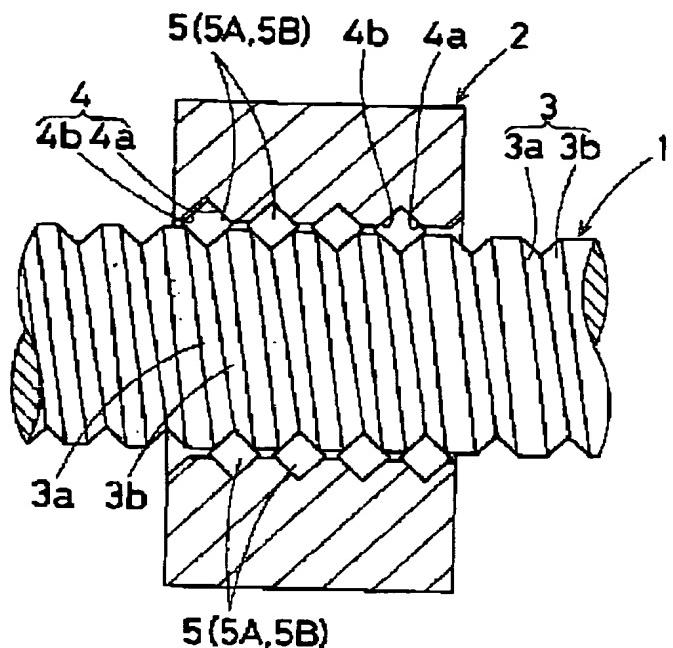
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TITLE : SCREW DEVICE



ABSTRACT : PURPOSE: To provide a screw unit that is equipped with a characteristic as a low frictional mechanism being equal to a ball screw and high in rigidity as well as long-livedness.

CONSTITUTION: With relative rotational motion between a screw shaft 1 and a nut body 2, each cylindrical roller 5 is rolling on each raceway surface of two section V-shaped helical grooves 3 and 4 formed in space between the screw shaft 1 and the nut body 2, and thereby the screw shaft 1 and the nut body 2 are relatively shifted in the axial direction. In this screw structure, a screw unit is provided with a characteristic as a flow frictional mechanism being equal to a ball screw owing to a rolling contact of the cylindrical roller 5, while the contact between the cylindrical roller 5 and each raceway surface of the helical grooves 3 and 4 is linear contact, whereby rigidity in the unit itself is high and its service life is long enough. This structure is adoptable to various screw structures so far adopted in the conventional ball screw.

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